

# Application for participation in training programme on "Remote sensing and GIS tools for Natural Resource Management"

1. Full Name (in block letters):
2. Designation and official address:
3. Telephone No: FAX No.
4. E-mail Id:
5. Permanent address:
6. Date of birth:
7. Sex: Male/Female
8. Marital status: Married/Unmarried
9. Academic record:
10. Professional experience in GIS:

Place : Signature of Applicant

Date :

## Recommendation of the sponsoring authority :

Certified that the candidate is well versed in the use of personal computers.

## Signature of the sponsoring authority Designation

### Application may be sent to :

Associate Professor & Head  
Dept. of Wood Science  
College of Forestry  
Kerala Agricultural University, Vellanikkara  
KAU P.O., Thrissur – 680658  
E-mail: anoop.ev@kau.in

For enquiries related to course :  
srinivasan.k@kau.in

## Venue :

College of Forestry, Vellanikkara. The College of Forestry is located in the main campus of the Kerala Agricultural University at Vellanikkara, about 10 km east of Thrissur city along the side of the National Highway 47. It is very near to the Peechi – Vazhani wildlife sanctuary.

## Eligibility

Officers of various departments under the Government of Kerala, Scientists of Kerala Agricultural University and other R&D organizations are eligible for the training. Minimum qualification is Graduation with proficiency in computer use, certified by concerned head of office.

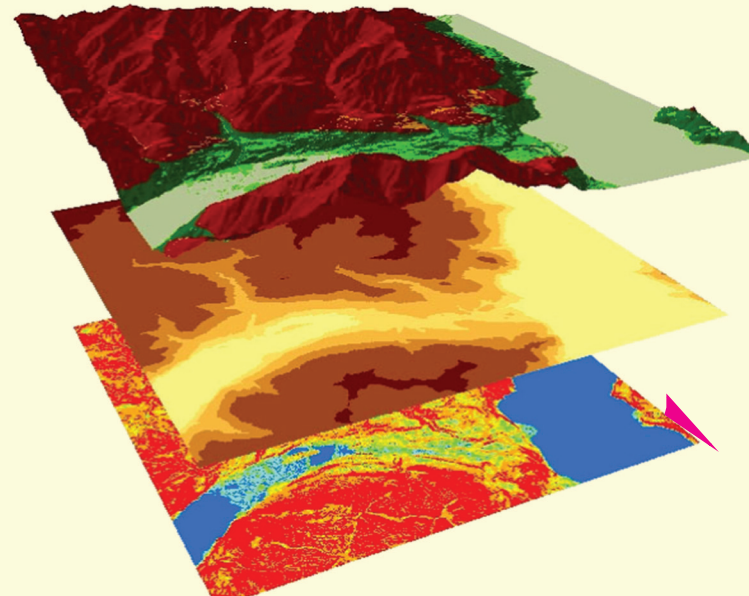
Accommodation will be arranged to the selected trainees on request on payment basis.

No TA/DA will be provided from this training programme.

**Number of seats:** 40 per batch

Last date for receipt of application : 16.03.2016

The selected candidates will be informed through e-mail. They are also required to bring their own Laptops for the practical sessions.



# TRAINING PROGRAMME ON Remote sensing and GIS tools for Natural Resource Management



**19<sup>th</sup> to 23<sup>rd</sup> March, 2016**

*Sponsored from*  
**GIS Training Project**

*funded by*  
**State Planning Board  
Government of Kerala**

*Organized by:*



**Kerala Agricultural University  
GIS Unit, College of Forestry  
Vellanikkara**

## Introduction

The adoption of spatial planning approaches, supported by Remote Sensing (RS), Global Positioning Systems (GPS), and Geographic Information Systems (GIS) technologies is required for the effective management and monitoring of natural resources leading to the development of agriculture, forestry and allied sectors in the state.

## Geographic Information System (GIS)

Geographic Information System is a specialized data management system designed for the entry, analysis and display of the data commonly found on maps. The strength of GIS is its ability to integrate data from various resource disciplines, using a common geographical boundary of reference. These computerized systems which can produce geographic (spatial) information integrated with statistical and textual data, are becoming the most useful and powerful analytical tools for resource planners and researchers. GIS technology helps us to organize the data about such problems and understand their spatial associations, and provides a powerful means for analyzing and synthesizing information about them.

## Remote Sensing (RS)

Satellite imageries and aerial photographs provide ample scope for documentation of real-time data on many aspects of land resources. Satellites have nearly revolutionized map-making process. Thousands of satellites are encircling the earth, photographing every inch of the land and sea. The satellite remote sensing system helps in recognizing roads, buildings, all sorts of installations, water bodies etc.

## Global Positioning System (GPS)

The hand held and vehicle mounted GPS has revolutionized the process of accurate location and mapping by obtaining coordinates and altitude of any locality with pinpoint accuracy. GIS and Digital Elevation Models along with GPS are used for different types of applications in natural resource management.

### Objectives

- To provide orientation in remote sensing, global positioning system and geographic information system.
- To demonstrate the use of RS-GIS tools for spatial planning and in decision making.
- Develop expertise in a suite of GIS and DIP softwares.

## Course Content

### Theory:

- Principles of Remote Sensing : Platforms, Sensors satellites and Data Products.
- GIS: Functional requirements, components, recent trends and applications. GIS Analysis: Raster and Vector.
- GIS modeling for solving spatial problems Spatial Analyst and 3D Analyst, Creating Surface models and analysing Surfaces
- DIP - Image interpretation techniques, Image pre-processing and enhancement methods, Image processing / extraction, accuracy assessment.
- Introduction to Global Positioning System; GPS satellites constellations; GPS segments, receivers; Accuracy of GPS measurements.

- Applications of Geomatics in EIA
- Terrain analysis, Monitoring LULCC, Change detection, updating existing forest inventories, forest cover type discrimination, delineation of burnt areas, afforestation and deforestation mapping, Biomass Estimation.

### Practical:

- Hands on sessions in map preparation using QGIS.
- GIS analysis and Designing cartographic output using ArcGIS 10.3.
- Mapping exercises using GPS.
- Practical training in the use of ERDAS IMAGINE.

**Duration:** Five days

### Faculty details:

Resource persons for the training will be from National and State Institutions as well as from the Kerala Agricultural University.

